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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

VO, LILIAN

ART UNIT PAPER NUMBER

2195

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/981,883

Applicant(s)

HAUGHEY, JOHN

Examiner

Lilian Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6, 8, 11, 13 - 26 and 32 - 41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6, 8, 11, 13 - 26 and 32 - 41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

1. Claims 6, 8, 11, 13 – 26 and 32 – 41 are pending. Claims 1 – 5, 7, 9, 10, 12 and 27 – 31 have been cancelled.

Claim Rejections - 35 USC § 112

2. Claims 23 - 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. **Claims 23 - 26** recite the limitations "wherein suspending" and "wherein the context" in pages 5 - 6. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 6, 11, 13 – 18 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Peters et al. (6,385,637, hereinafter Peters).

6. Regarding **claim 6**, Peters discloses a method of executing a set of at least one incomplete task, comprising:

- a. selecting an incomplete task from the set on the basis of an expected duration for that task (col. 9, lines 5 – 26: task is executed for a predetermined period of time, which is determined by the time-slicing scheme of the operating system);
- b. resetting an execution timer having an expiry condition (col. 9, lines 5 – 26);
- c. advancing execution of the selected task until the earlier of (i) completion of the selected task or (ii) expiry of the execution timer (col. 1, lines 35 – 43, col. 2, lines 2 – 47, col. 9, lines 5 - 26); and
- d. upon expiry of the execution timer prior to completion of the selected task, suspending execution of the selected task (col. 9, lines 5 – 26).

7. Regarding **claims 11 and 13**, Peters discloses that advancing execution of the selected task includes beginning the selected task if it has not been previously suspended and resuming the selected task if it has been previously suspended (col. 9, lines 5 – 13).

8. Regarding **claims 14 – 18**, Peters discloses that suspending the selected task includes saving and retrieving a context associated with the selected task includes state of the task and state of a CPU, and variables local to the selected task (col. 9, lines 5 – 26).

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9. Regarding **claim 20**, Peters discloses that the expiry condition of the execution timer is a pre-determined period of time (col. 9, lines 5 – 13).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peters et al. (6,385,637) as applied to claim 6 above, in view of Shi et al. (US 6,757,897, hereinafter Shi).

12. Regarding **claim 19**, although Peters discloses time slice scheduling, he did not clearly disclose that the expiry condition of the execution timer is a pre-determined number of clock cycles. Nevertheless, Shi discloses that the expiry condition of the execution timer is a pre-determined number of clock cycles (col. 1, line 60 – col. 2, line 2). It would have been obvious for one of an ordinary skill in the art, at the time the invention was made to incorporate this feature to Peters for scheduling tasks so that all tasks can get an equally amount processor time.

13. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peters et al. (6,385,637).

14. Regarding **claim 21**, Peters discloses the process timing in which the accumulator value corresponding to the selected process represents a total processing time (abstract). It would have been obvious for one of an ordinary skill in the art to recognize that when the timer expires, and the current processing task has not been completed will be suspended and waited, thus at this time, accounted for some percentage of completion during the scheduled time period.

15. Claims 22 – 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peters et al. (6,385,637), in view of Kullick et al. (US 5,764,992, hereinafter Kullick).

16. Regarding **claim 22**, Peters discloses a method of executing a set of incomplete tasks (col. 1, lines 35 – 43, col. 2, lines 2 – 47, col. 9, lines 5 - 26). Peters did not clearly disclose the step of removing an existing incomplete task from the set when a newer version of the existing incomplete task is added to the set. Nevertheless, Kullick discloses the step of removing the old version program (existing task) when there existed a new version of the program (col. 5, lines 8 – 10, 17 – 23). It would have been obvious for one of an ordinary skill in the art, at the time the invention was made to incorporate this concept to Peters for replacing old version of information/program with a newer/updated version information/program to obtain an effective result and enhance quality of service.

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17. Regarding **claims 23 - 26**, Peters discloses that suspending the selected task includes saving and retrieving a context associated with the selected task includes state of the task and state of a CPU, and variables local to the selected task (col. 9, lines 5 – 26).

18. Claims 8, 32 – 38, 40 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peters et al. (6,385,637), in view of Fukuda (US 6,553,400).

19. Regarding **claim 8**, Peters discloses a method of executing a set of at least one incomplete task, comprising:

- a) selecting an incomplete task from the set (col. 9, lines 5 – 26);
- b) resetting an execution timer having an expiry condition (col. 9, lines 5 – 26);
- c) advancing execution of the selected task until the earlier of (i) completion of the selected task or (ii) expiry of the execution timer (col. 1, lines 35 – 43, col. 2, lines 2 – 47, col. 9, lines 5 - 26); and
- d) upon expiry of the execution timer prior to completion of the selected task, suspending execution of the selected task (col. 9, lines 5 – 26).

Peters did not clearly disclose selecting a task on the basis of a number of times the task has been previously suspended. Nevertheless, Fukuda discloses the method for performing suspend and resume operations of the task in which the number of resume operations with respect to the determined program task is counted for selecting to run (col. 2, line 59 – col. 3, line 10). It would have been obvious for one of an ordinary skill in the art, at the time the invention was made, to incorporate the feature in Fukuda's with

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Peters' so that tasks can be serviced/selected to run on the basis of number of resume operations (Fukuda: col. 3, lines 2 – 10).

20. Regarding **claims 32 - 33**, Peters discloses that advancing execution of the selected task includes beginning the selected task if it has not been previously suspended and resuming the selected task if it has been previously suspended (col. 9, lines 5 – 13).

21. Regarding **claims 34 – 38**, Peters discloses that suspending the selected task includes saving and retrieving a context associated with the selected task includes state of the task and state of a CPU, and variables local to the selected task (col. 9, lines 5 – 26).

22. Regarding **claim 40**, Peters discloses that the expiry condition of the execution timer is a pre-determined period of time (col. 9, lines 5 – 13).

23. Regarding **claim 41**, Peters discloses the process timing in which the accumulator value corresponding to the selected process represents a total processing time (abstract). It would have been obvious for one of an ordinary skill in the art to recognize that when the timer expires, and the current processing task has not been completed will be suspended and waited, thus at this time, accounted for some percentage of completion during the scheduled time period.

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24. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peters et al. (6,385,637) in view of Fukuda (US 6,553,400), as applied to claim 8 above, and further in view of Shi et al. (US 6,757,897).

25. Regarding **claim 39**, although as modified Peters disclose time slice scheduling (Peters: col. 9, lines 5 – 26), they did not clearly disclose that the expiry condition of the execution timer is a pre-determined number of clock cycles. Nevertheless, Shi discloses that the expiry condition of the execution timer is a pre-determined number of clock cycles (col. 1, line 60 – col. 2, line 2). It would have been obvious for one of an ordinary skill in the art, at the time the invention was made to incorporate this feature to modified Peters for scheduling tasks so that all tasks can get an equally amount processor time.

Response to Arguments

26. Applicant's arguments with respect to claims 6, 8 and 22 have been considered but are moot in view of the new ground(s) of rejection.

27. With respect to the step “selecting an incomplete task from the set on the basis of an expected duration for that task” of claim 6, this can be found in Peters, which he discloses that task is executed for a predetermined period of time, which is determined by the time-slicing scheme of the operating system (col. 9, lines 5 – 26).

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Conclusion

28. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

29. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilian Vo whose telephone number is 571-272-3774. The examiner can normally be reached on Monday - Thursday, 7:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist at 571-272-2100.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lilian Vo
Examiner
Art Unit 2127

lv
May 10, 2005


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